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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/708,393	02/27/2004	Junaid Syed	3040	2392
31424	7590	08/18/2005	EXAMINER	
BABCOCK IP LLC 24154 LAKESIDE DRIVE LAKE ZURICH, IL 60047			LIE, ANGELA M	
			ART UNIT	PAPER NUMBER
			2821	

DATE MAILED: 08/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding...

OK

Office Action Summary	Application No.	Applicant(s)	
	10/708,393	SYED ET AL.	
	Examiner	Art Unit	
	Angela M. Lie	2821	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 July 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2 and 4-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-6 and 9-19 is/are rejected.
- 7) ☒ Claim(s) 7 and 8 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 2, 4-6 and 9-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kildal (US 6137449) in the view of Tubbs (US 4876554).

As to claims 1 and 10, Kildal teaches a radome for a reflector antenna and he inherently teaches a method for the front/back ratio of a reflector antenna, comprising a radome (Figure 2, element 50) with a conductive ring (Figure 2, element 51) having an inward facing edge proximate a periphery of the radome (the edge of the element 51 facing toward element 41). Kildal does not teach that the inward facing edge extends inward along the radome at least to an inner diameter of a distal end of a main reflector of the reflector antenna. Tubbs teaches an antenna with a radome cover attached by the ring that faces toward inner diameter and which curves along radome layer (Figure 2, elements 126 and 14). It would have been obvious to one of the ordinary skill in the art during the time when the invention was made to use the ring that extends inwards toward the inner diameter of the reflector antenna along the radome as taught by Tubbs, in Kildal's attachment means, because this would allow for stronger attachment since ring would be in contact with radome for a greater length. This on the other hand would result in more durable connection i.e. if greater area of two elements is involved

in attaching those two parts together, there is lower probability of detachment.

Furthermore it is very important that radome layer is attached very durably, so wind or other weather disturbances will not cause the detachment of radome from the rest of the antenna.

As to claims 2 and 16, Kildal discloses the apparatus wherein the conductive ring (Figure 2, element 51) extends from an inside surface (Figure 2, the part of the element 50, which is located between two arms of the metal ring, facing toward the element 41) to an outside surface (Figure 2, the part of the element 50, which is located between two arms of the metal ring, facing away from the element 41), around a periphery of the radome (as shown in the figure 2, elements 50 and 51).

As to claims 4, 11 and 18, Kildal discloses the apparatus wherein the conductive ring is one of metalised, electroplated or over molded upon the radome (column 6, lines 59-63).

As to claims 5 and 19, Kildal discloses the apparatus wherein the conductive ring is one of metal, metallic foil, adhesive foil or a conductive rubber coupled to the radome (column 6, lines 56-58, i.e. conductive ring is made of metal).

As to claims 6 and 12, Kildal discloses the apparatus wherein the conductive ring is a plurality of electrically isolated segments (Figure 14, elements 41, 42 and 51, where the element 42 is a metalized segment of the ring and the element 41 is a dielectric which isolate segment 51 from segment 42).

As to claims 9 and 14, Kildal discloses the apparatus wherein the conductive ring on the outside surface has a smaller inner diameter than the conductive ring on the

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inside surface (Figure 14, elements 50 and 51, since the inner surface diameter (i.e. facing toward the element 41) shapes along the slight curvature of the periphery of radome, and the inner diameter of the outside surface shapes along substantially straight line, it results in the inside diameter of the outer surface to be smaller than the diameter of the inner surface).

As to claim 13, Kildal discloses the reflector antenna which inherently involves the method wherein the conductive ring (Figure 2, element 51) is coupled to the conductive ring (Figure 2, element 51) whereby it extends around the periphery from an inside surface (the side of the element 50 facing in the open end of the reflector dish (10)) to an outside surface (the side of the element 50 facing away from the open end of the reflector dish (10)).

As to claim 15, Kildal discloses a reflector antenna comprising: a sub reflector positioned to redirect an RF signal from a feed to illuminate a reflector (column 1, lines 44-49, the main purpose of the sub reflector is to reflect an RF signal onto the reflector (10), because otherwise the reflector antenna could not operate), a radome (figure 2, element 50) adapted to cover an open distal end of the reflector (as shown in figure 2, elements 50 and 10); and a conductive ring (Figure 2, element 51) coupled to the radome having an inward facing edge proximate a periphery of the radome (as shown in figure 2, where the edge surrounding the periphery of the radome (50) is an inward edge). Kildal does not teach that the inward facing edge extends inward along the radome at least to an inner diameter of a distal end of a main reflector of the reflector antenna. Tubba teaches an antenna with a radome cover attached by the ring that

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faces toward inner diameter and which curves along radome layer (Figure 2, elements 126 and 14). It would have been obvious to one of the ordinary skill in the art during the time when the invention was made to use the ring that extends inwards toward the inner diameter of the reflector antenna along the radome as taught by Tubbs, in Kildal's attachment means, because this would allow for stronger attachment since ring would be in contact with radome for a greater length. This on the other hand would result in more durable connection i.e. if greater area of two elements is involved in attaching those two parts together, there is lower probability of detachment. Furthermore it is very important that radome layer is attached very durably, so wind or other weather disturbances will not cause the detachment of radome from the rest of the antenna.

As to claim 17, Kildal teaches the apparatus wherein the conductive ring has an inner diameter proximate an inner diameter of a reflector dish open end (column 6, lines 56-58, since metal ring (51) goes around the open end of the reflector dish (10) it is inherent that the diameter of the metal ring will be proximate to the diameter of the open end of the reflector dish).

Allowable Subject Matter

3. Claims 7 and 8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
4. The following is a statement of reasons for the indication of allowable subject matter:

As to claim 7, the prior art failed to teach an apparatus as disclosed in claim 1, further including an absorber coupled to the inside of the radome periphery.

As to claim 8, the prior art failed to teach the apparatus as disclosed in claim 1, wherein the absorber is one of a foam ring and an absorbing surface coating.

Response to Arguments

5. Applicant's arguments filed July 22, 2005 have been fully considered but they are not persuasive.

The objection to claims 4, 11 and 18 is withdrawn. An examiner appreciates the detailed explanation of the word "electrodaged".

The objection to claims 4, 5, 8, and 19 based on claims phrasing syntax i.e. "action by one of A, B and C" is withdrawn.

With respect to the applicant's assertion that claims 1-6 and 9-19 previously rejected under 35 U.S.C. 102(b) as anticipated by Kildal, are now improper because of added limitation i.e. "an inner edge that is positioned inward of the inner diameter of the main reflector distal end", an examiner agrees that Kildal alone does not teach this limitation, however in combination with Tubbs teaching i.e. the ring facing inwards, it would have been obvious to one of the ordinary skill in the art to make a use of this teaching and extend the ring taught by Kildal and make it face inwards toward inner diameter of the reflector antenna, for the reasons disclosed in the justification for rejecting claim 1.

With respect to the applicant's assertion that rejection of claim 7 under 35 U.S.C. 103 (a) as unpatentable over Kildal in view of Syed is improper because the present application 10/064,594 and application 10/604,756 published as US 20050035923 "Syed" were, at the time the invention of application 10/064594 was made, owned by Andrew Corporation. An examiner agrees with this comment and therefore the rejection of claim 7 under 35 U.S.C.103 (a) is withdrawn.

With respect to claim 8, the rejection of this claim under 35 U.S.C 103(a) is withdrawn, because claim 7 has an indicated allowable subject matter.

6. Claims 1, 2, 4-6, 9-19 remain rejected and claims 7 and 8 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

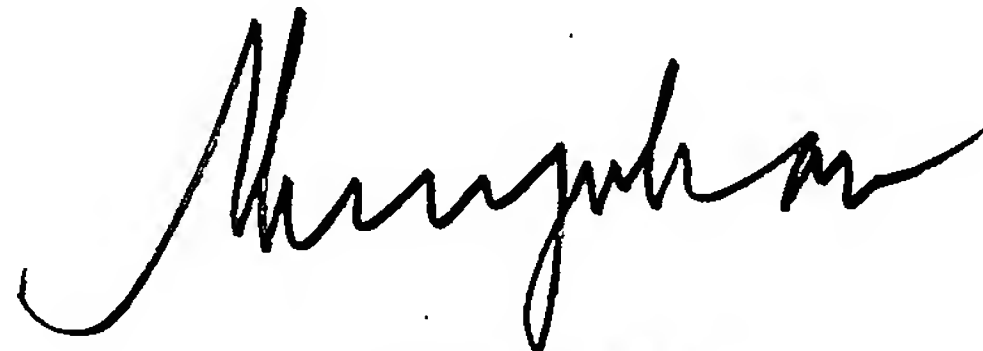
7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Angela M. Lie whose telephone number is 571-272-8445. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on 571-272-1834. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Angela M Lie

A handwritten signature in black ink, appearing to read 'Thuy V. Tran', with a stylized, cursive script.

**THUY V. TRAN
PRIMARY EXAMINER**